

Notice of Allowability

Application No.

10/629,896

Examiner

Patrick Miller

Applicant(s)

KARIKOMI, TAKAAKI

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/29/05.
2. ☒ The allowed claim(s) is/are 1-40.
3. ☒ The drawings filed on 30 July 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


MARLON T. FLETCHER
PRIMARY EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-40 are allowed.
2. The following is an examiner's statement of reasons for allowance:
 - Ide (6,801,011) discloses motor control methods that feature a high-frequency voltage or current having a different frequency from a driving frequency that is superimposed on a synchronous motor and the synchronous motor is controlled by using the position of a magnetic pole, which is estimated based on the electrical saliency of the structure of a rotor. See col. 1, ll. 58-63.
 - With respect to claims 1, 20, and 39, the Prior Art does not disclose a superimposing unit for superimposing a superimposed current on a drive current for driving the motor, where the superimposed current has a different frequency from a frequency of the drive current; a feature target generating means that calculates a target value of a feature based on at least one of the length of a long axis of either a current or voltage vector locus, respectively, and the length of a short axis, corresponding to the target torque; a separating means for separating the superimposed current from the current supplied to the electric motor; and an actual feature detecting means that detects an actual value of the feature based on at least one length of a long axis of either a current or voltage vector locus of the superimposed current separated by the separating means and the length of a short axis; and a phase angle detecting means that detects a phase angle based on the actual and featured target values.

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- With respect to claim 40, the primary reason for allowance is because the Prior Art does not disclose calculating a target value of a feature, where “a feature” is interpreted based on the specification, based on at least one of the length of a long axis of a current vector locus and the length of a short axis vector locus, corresponding to a target torque for the electric motor; and superimposing a superimposed current on a drive current for driving the electric motor, thereby detecting an actual value of the feature based on at least one of the length of the long axis of a current vector locus of the superimposed current and the length of the short axis of the current vector locus.
3. Therefore, based on the arguments and amendments presented by the Applicant, the Examiner acknowledges the Prior Art fails to make obvious the Applicant’s claimed invention.
 4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Miller whose telephone number is 571-272-2070. The examiner can normally be reached on M-F, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 41. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick Miller
Examiner
Art Unit 2837

pm
June 3, 2005



MARLON T. FLETCHER
PRIMARY EXAMINER